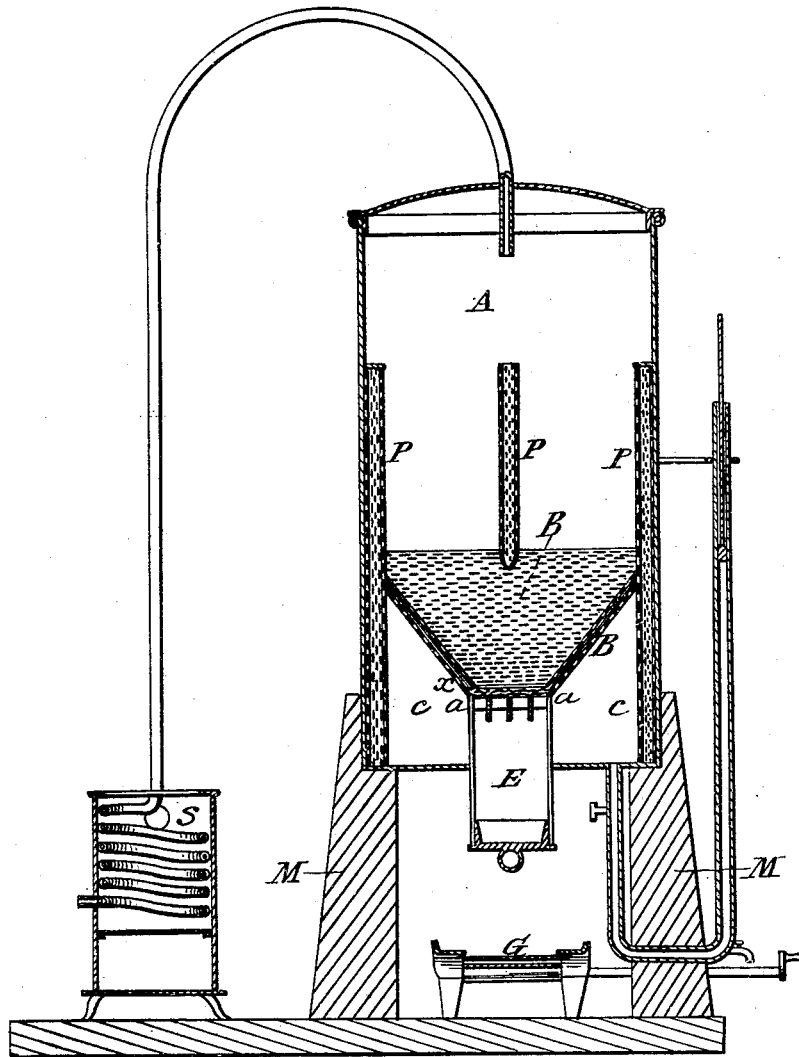


H. Y. HIND.

Peat Machine.

No. 53,547.

Patented March 27, 1866.



Witnesses:

J. Adams
W. Smith

Inventor:

H. Y. Hind
by H. Forrey Atty.

UNITED STATES PATENT OFFICE.

HENRY YOULE HIND, OF FREDERICTON, NEW BRUNSWICK.

IMPROVED APPARATUS FOR PREPARING PEAT.

Specification forming part of Letters Patent No. 53,547, dated March 27, 1866.

To all whom it may concern:

Be it known that I, HENRY YOULE HIND, of Fredericton, in the county of York, in the Province of New Brunswick, have invented a new and useful Improvement in Apparatus for Drying and Preparing Peat; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 represents a vertical section of the drying apparatus and furnace.

The object of my invention is to produce an apparatus which will rapidly deprive freshly-cut peat of its moisture and render it compact and ready for immediate use as fuel; and the invention consists in subjecting the peat to the operation of an air-pump, by which the water and moisture in the peat is forcibly expressed. A provision is also made for the admission of heated air in and through the mass of peat for the purpose of further expediting the drying process.

Referring to the drawings, A represents a cylinder of any convenient size in which the peat is placed. This cylinder is composed of iron, which may be lined with soft brick or other suitable absorbent material compactly arranged around the interior of the cylinder and supported in a stack of brick-work or stone, as represented by M.

The lower part of the cylinder A is provided with a conical or funnel shaped bottom, formed of two perforated metal plates, between which is placed one or more pieces or sheets of strong canvas or other suitable textile fabric. The lower edges of this funnel-shaped or false bottom rest upon a flange, *x*, formed on the upper part of an eduction-pipe, E, secured to the central part of the bottom of the cylinder A, which pipe extends upward a short distance into the cylinder. When necessary, the upper perforated plate of the false bottom B may be removed to admit of the removal and renewal of the interposed canvas.

The eduction-pipe E is of square form and extends a short distance below the cylinder A. Within the pipe is placed a series of metal plates or strips, crossing each other at right angles, and with their edges arranged verti-

cally for the purpose of cutting the peat into rectangular longitudinal pieces as it passes from the cylinder. The lower end of the eduction-tube E is provided with a valve or cover, to be opened when the peat is to be discharged.

The space between the false bottom B and the sides and bottom of the cylinder forms a chamber, C, into which the water escapes from the peat, and into this chamber is introduced a pipe, I, communicating with an air-pump, arranged in any suitable manner and operated by any suitable power. The operation of this pump exhausts the air from the chamber C, and consequently the air is forced into the mass of peat above by atmospheric pressure, thus expressing the water and moisture contained in the peat. The water may be conducted from the chamber by pipes in any suitable manner. The air-pump may be changed from an exhaust to a force pump, when desirable, by altering the position of the valves.

On or near the inner sides of the cylinder A is arranged a series of vertical perforated pipes, P, of iron or other suitable material, enveloped in stout canvas or other suitable material when found necessary, or the pipes may be filled with any proper absorbent or filtering material. These pipes may be of cylindrical form and separated from the sides of the cylinder, or they may be of rectangular shape and attached to the sides of the cylinder. The object of these pipes is to assist in exhausting the moisture contained in the peat in the cylinder.

Below the eduction-pipe is arranged an endless belt or apron, G, which is used to carry off the dried and cut peat as it is discharged from the cylinder to a drying-house or any convenient depository.

Should it become necessary to expedite the process of drying the peat, a current of heated air may be introduced into the main cylinder and passed through the peat. As a means of effecting this, I place at the side of the cylinder a furnace or heating apparatus, represented by S, on the inner side of which is arranged a coil of pipe having one end communicating with the atmosphere, while the other end is carried up to the top of the cylinder and inserted in a cap placed upon the top of the cylinder. This heating apparatus is designed to be used in case it becomes necessary to provide

for a rapid supply of perfectly dry peat. The heated air is drawn through the mass of peat by the operation of the air-pump.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is—

1. The method herein described of drying peat and preparing it for immediate use as fuel by exhausting the moisture and compressing the peat, substantially as and for the purpose set forth.

2. The conical or funnel-shaped perforated bottom B, with the interposed layer or filling of canvas, or its equivalent, as and for the purpose described.

3. The combination of the cylinder A, per-

forated bottom B, and chamber C, as and for the purpose set forth.

4. The combination of the cylinder A, perforated bottom B, chamber C, and the air-exhausting apparatus, as and for the purpose set forth.

5. The combination of the cylinder A, provided with the false bottom B, and air-space C, with the heating apparatus S, and its connecting-pipe T, substantially as and for the purpose described.

HENRY YOULE HIND.

Witnesses:

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